



vinyl group of formula $\text{Het}^1\text{-C(Het}^2\text{)=CH}_2$ (where Het^1 and Het^2 are the same or different and is each a nitrogen containing heterocyclic group or Het^1 is a nitrogen containing heterocyclic group and Het^2 is H), -C(=NH)OR^2 , NCO , NCS , COR'' , COOR' , SR^2 , NHN^2R^3 , $\text{NHCONHN}^2\text{R}^3$, $\text{NHCSNHN}^2\text{R}^3$, CONR^2R^3 , OR^2 , NR^2R^3 , $(\text{CH}_2)_p\text{R}^1$, $(\text{CH}_2)_p\text{ArR}^1$, $(\text{CH}_2\text{O})_p\text{CH}_2\text{R}^1$, $(\text{CH}_2\text{OCH}_2\text{O})_q\text{ArR}^1$, $(\text{CHCH})_r\text{R}^1$, $(\text{CHCH})_r\text{ArR}^1$ where R^2 and R^3 are the same or different and are independently selected from H, $(\text{CH}_2)_p\text{R}^1$, $(\text{CH}_2)_p\text{ArR}^1$, $(\text{CH}_2\text{O})_p\text{CH}_2\text{R}^1$, $\text{-(CH}_2\text{OCH}_2\text{O)}_q\text{ArR}^1$, $(\text{CHCH})_r\text{R}^1$, $(\text{CHCH})_r\text{ArR}^1$ and where R^1 is selected from SH, OH, NH_2 , COOH , NCS , -N=N , or -C(=NH)OCH_3 , COR'' , where R'' is H, halogen, N_3 , alkoxy, OAr , imidyloxy, imidazoyloxy, alkyl, or alkyl substituted with a halogen or other leaving group, where p is an integer from 1 to 20, more typically 1 to 10, still more typically 1 to 4, even more typically 1 to 2 and yet more typically 1; q is an integer from 1 to 20, more typically 1 to 10, still more typically 1 to 4, even more typically 1 to 2 and yet more typically 1; r is an integer from 1 to 4, more typically 1 or 2, still more typically 1; and Ar is optionally substituted aryl or optionally substituted aralkyl, provided that when one of X and Y is selected from C-NO_2 , C-OH , C-Cl , C-CH_3 or C-NH_2 then the other X or Y substituent cannot be selected from C-NO_2 , C-OH , C-Cl or C-NH_2 . In moieties of formula $(\text{CH}_2)_p\text{R}^1$, $(\text{CH}_2)_p\text{ArR}^1$, one or more methylene groups may also be replaced with O,